

PLANNING A SYSTEM OF MAIN COUNTY ROADS

By W. S. Freel,
Henry County Surveyor.

There are 800 miles of public highways in Henry County, divided as follows: state 50 miles, county 460 miles, and township 290 miles. Of the state highways in the county, 25 miles are hard surface roads and 25 miles are gravel roads.

Only 3 miles of county highways are hard surfaced, the remainder being gravel. The township roads are all gravel roads excepting 3 miles, of graded earth roads.

The county is favored by an abundance of gravel and naturally the roads are mostly built of this material. These are good roads where the traffic is not too heavy, but on the main traveled routes the motor traffic has become so heavy that the cost of maintenance is now so high that paving has become necessary.

Several attempts have been made in the last six years to pave some of these heavier traveled roads, but remonstrances have prevailed in all cases. Last September the Newcastle chamber of commerce aided by a large number of the heavy taxpayers of the county, sponsored a movement to plan a system of main roads serving the entire county. A petition to the board of commissioners asking for the paving of certain designated and described roads was prepared, circulated and signed by the required number of freeholders in each township in the county. The proper notices were given and at a hearing before the board of commissioners, it was held that the petition was sufficient.

As a bond issue in excess of 1% of the county valuation was necessary to carry out the project under the county unit law, an election was ordered for the general election day, November 2nd. The proposition was carried by a decisive majority.

In planning the location of the various routes of the system we have attempted to serve the greatest number of people, to avoid railroad grade crossings, to connect all the towns in the county and to connect with main roads in adjoining counties where ever possible. We also endeavored to avoid heavy grades and the necessity for any great amount of re-location. The plans involve only two railroad grade crossings outside incorporated towns, less than one mile of grade revision, and but one new bridge. Practically all of the bridges and small pipe culverts are of late construction and are in good condition.

The annual cost of maintenance of the 800 miles of roads in the county at this time is as follows:

State approximately	\$20,000.
County approximately	100,000.
Township approximately	30,000.

The annual cost of maintenance of the 70 miles designated in this project is approximately \$50,000 or about \$700 per mile. When paved, the annual cost of maintenance would be reduced at least \$500 per mile, or a saving of \$35,000. The paving of these main roads will naturally attract a large amount of the traffic which is now going over the unpaved roads which will result in a material reduction in the cost of upkeep on the latter.

Types or materials for the proposed paving have not as yet been selected, but this will be done following the taking of a traffic census of the various routes.

The system as planned, in addition to the state highways located in the county, will place 95% of the population of the county within two miles of a paved road with connecting paved roads to any town or community in the county and to every part of the state.

The county is in excellent financial condition, having no outstanding obligations of any kind. The valuation for taxation in the county is \$66,000,000 of which approximately 30% is in the city of Newcastle.

SOME COUNTY DRAINAGE PROBLEMS

By H. C. Morrison,
Gibson County Surveyor.

I have decided to handle the subject assigned me by discussing some of the problems and difficulties arising in the design and construction of a particular drainage system on which I am now engaged. This drainage system is known as the Wm. Metz et al., or Big Creek, and is located in Vanderburg, Gibson and Posey counties. It consists of a system of one main ditch, 30 miles long, and 30 laterals varying from a few hundred feet in length to 9 miles, making in all, main and laterals, about 60 miles.

The drainage area comprises about 260 square miles or 166,400 acres, extending from state road 41 on the east to the Wabash River on the west and covering a territory averaging 6 to 7 miles north and south.

This work consisted in the reconstruction of the main ditch and one of the main laterals. These we cross-sectioned. Our